> ly as claimed. The claims differ from Walker by reciting that the core has a surface consisting essentially of a lower percentage by weight of lead. Cassidy disclose (see col. 1 line 16 through col. 4 line 65) that it is known in the art o form alloy-based fluid conditioning systems including copper and zinc without the use of lead to prevent deleterious lead contamination in drinking water. It would have been obvious to one skilled in the art to modify the water conditioner of Walker by utilizing the recited weight percentage of lead in the core surface in view of the teachings of Cassidy, to prevent lead contamination in drinking water. The specific weight percentages utilized to form the cored surface would have been an obvious matter of process optimization to one skilled in the art, depending on the specific water treated and results desired, absent a sufficient showing of unexpected results.

Applicant controverts this rejection as applied against the claims in this application for the following reasons.

Claim 1 has been amended to add the phrase:

> the core surface having the property of increasing the electrical potential of water flowing over the surface.

It must be admitted that anyone in the water treating business who is not comatose knows that lead in drinking water is not good. Cassidy is an example of such a statement. Applicant is willing to concede that it is obvious to want to remove lead from water treating devices.

The first problem with the Examiner's rejection, as applied to amended claim 1, is that Walker discloses a fuel conditioning device and amended claim 1 recites that the core has the property of increasing the electrical potential of water passing over the

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device. Walker does not disclose that his alloy has such a characteristic. In the event the Examiner continues a rejection of claim 1 based on Walker, applicant respectfully requested that the Examiner state why he thinks that Walker's alloy has such a property and, if so, why the property would remain if the lead were eliminated.

The root problem with the Examiner's analysis is that no one really understands why alloys such as the present invention are effective to reduce scale. One can test water passing over a device of this invention and measure the electrical potential of the water and theorize that the increased electrical potential interferes with scale deposition. But when one asks why does a particular alloy, as compared to a very similar one, create an increased electrical potential in the water, no one knows.

Thus, the Examiner is unwittingly using applicant's specification against applicant because the Examiner is assuming that the operative results achieved by the device of this invention are somehow inevitable or predictable. This is clearly not the case. In the event the Examiner continues a rejection based on Walker and Cassidy, it is respectfully requested that the Examiner explain how anyone would know that the alloy of this invention would be more effective to produce electrical potential in water passing over the device than a pure copper device or one of the commercially

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available devices. The inventors in this application, who have been in the water treating business for many years, had no idea whether the alloy of this invention would be effective or not, much less more effective, until a prototype had been cast and tested. If applicant or anyone else would not know this, how can the Examiner say it would be obvious?

Attached is a declaration of Roy Weaver, one of the inventors in this application, explaining that the tests reported on pages 5-6 were a comparison of a pure copper device, a commercially available device and a device of this invention. The increased electrical potential in water downstream of this device is a surprising and unexpected result that is not apparent from the prior art.

There are quite a few copper based compositions used or patented for use in water treating applications. Most of them include lead. It is submitted that neither the Examiner nor anyone else can predict which compounds will remain or become effective if the lead is removed.

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It is submitted that this application is in condition for allowance and early steps toward that end are earnestly solicited.

Respectfully submitted,

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